WHAT IS CLAIMED IS:

1   1.   A vending machine, comprising:

2   a housing for storing products to be dispensed;

3   a product dispensing assembly comprising a dispenser for holding and dispensing a

4   product,

5   an actual product depth for the dispenser;

6   a product dispensing mechanism depth setting for the product dispensing assembly;

7   a product vend detector adaptable to sense when the product is dispensed; and

8   a controller electrically coupled to the product dispensing assembly, wherein the

9   controller is adaptable to receiving input signals from the product vend detector and programmable

10   to adjust the product dispensing mechanism depth setting to match the actual product depth.

1   2.   The vending machine according to claim 1, wherein the controller compares the input

2   signals sent by the product vend detector to the product dispensing mechanism depth setting for the

3   product dispensing assembly to determine whether the controller will enter a learning mode to adjust

4   the depth setting.

1   3.   The vending machine according to claim 2, wherein the learning mode is entered

2   when the input signals sent by the product vend detector do not match the depth setting for the

3   product dispensing assembly.

1   4.   The vending machine according to claim 3, wherein when in the learning mode, the

2   controller counts the number of products vended during a complete vend cycle of the product

3   dispensing mechanism.

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1   5.   The vending machine according to claim 4, wherein the controller adjusts the depth

2   setting of the product dispensing mechanism to match the number or products vended during the

3   complete vend cycle.

1   6.   The vending machine according to claim 5, further comprising

2   a product chute for receiving the product when dispensed by the dispenser; and

3   wherein the product vend detector is positioned substantially at the product chute.

1   7.   The vending machine according to claim 6, wherein the product vend detector is an

2   impact sensor.

1   8.   The vending machine according to claim 6, wherein the product vend detector is an

2   optical sensor.

1   9.   The vending machine according to claim 5, wherein the product vend detector is

2   positioned substantially below the product dispenser.

1   10.   The vending machine according to claim 9, wherein the product vend detector is an

2   impact sensor.

1   11.   The vending machine according to claim 9, wherein the product vend detector is an

2   optical sensor.

1   12.   A method for dispensing products from a vending machine, comprising the steps of:

2   storing products in a product dispensing assembly having an actual product depth;

3   setting a first product depth setting for a product dispensing assembly;

4   sensing input signals when products are dispensed;

5   transmitting the input signals from a product vend detector to a controller;

6   comparing the input signals to the first product depth setting; and

7   adjusting the first product depth setting for a product dispensing assembly to a second

8 product depth setting that matches the actual product depth.

1   13.   The method according to claim 12, wherein the controller compares the input signals

2 transmitted by the product vend detector to the first product depth setting for the product dispensing

3 assembly to determine whether the controller will enter a learning mode to adjust the depth setting.

1   14.   The method according to claim 13, wherein the learning mode is entered when the

2 input signals sent by the product vend detector do not match the depth setting for the product

3 dispensing assembly.

1   15.   The vending machine according to claim 14, wherein when in the learning mode, the

2 controller counts the number of products vended during a complete vend cycle of the product

3 dispensing mechanism.

1   16.   The vending machine according to claim 15, wherein the controller adjusts the depth

2 setting of the product dispensing mechanism to match the number or products vended during the

3 complete vend cycle.